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Central Intelligence Agency

Washington, D.C. 20505

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DIRECTORATE OF INTELLIGENCE

21 NOV 1984

MEMORANDUM FOR: Donald H. Pearlman
Executive Assistant to the Secretary
Department of Energy

FROM: [redacted] 25X1
Director of Global Issues

SUBJECT: Mexican Oil: Production Surge Capacity, Export Capacity, and Facility Vulnerability [redacted] 25X1

Attached, in response to your request, is an assessment of Mexican oil production surge capacity, export capacity, and vulnerability of its oil production facilities. If we can be of further assistance on this or any related matter, please call [redacted] 25X1

[redacted], Chief, Strategic Resources Division [redacted] 25X1

[redacted] 25X1

Attachment:
Mexican Oil Production Surge Capacity, Export Capacity, and Facility Vulnerability
GI M 84-10210, November 1984 [redacted] 25X1

[redacted] 25X1

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[redacted]

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Central Intelligence Agency

Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

21 NOV 1984

MEMORANDUM FOR: Charles V. Boykin
Deputy Assistant Secretary for Intelligence
Department of Energy

FROM: [redacted] 25X1
Director of Global Issues

SUBJECT: Mexican Oil: Production Surge Capacity, Export Capacity, and Facility Vulnerability [redacted] 25X1

Attached, for your information, is a copy of an assessment that we have provided to Mr. Pearlman at his request, which addresses Mexican oil production surge capacity, export capacity, and vulnerability of its oil production facilities. If we can be of further assistance on this or any related matter, please call [redacted] 25X1

[redacted] Chief, Strategic Resources Division [redacted] 25X1

[redacted] 25X1

Attachment:
Mexican Oil Production Surge Capacity, Export Capacity, and Facility Vulnerability [redacted] 25X1
GI M 84-10210, November 1984

[redacted] 25X1

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[redacted]

[redacted] 25X1

SUBJECT: Mexican Oil: Production Surge Capacity, Export Capacity, and Facility Vulnerability [redacted] 25X1

OGI/SRD/PRB [redacted] (15 Nov) 25X1

Distribution:
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Central Intelligence Agency

Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

19 November 1984

Mexican Oil: Production Surge Capacity, Export Capability, and Facility Vulnerability

Summary

Mexico is currently producing about 2.6 million barrels of oil per day (b/d). We believe that Mexico could increase oil production by about 200,000 b/d within 30 days, if circumstances warranted. Virtually all of this increase would come from wells at the Cantarell heavy oilfield that were choked in during the summer because of weak oil demand. We believe that because of the slow pace at which Mexico brings new production onstream, an increasing portion of this immediately available excess capacity will simply be used to offset production declines at existing fields. Because of its high degree of concentration and minimum redundancy, the Mexican oil system is highly vulnerable to disruption. With its present budgetary restrictions, Mexico is not taking steps to improve the security of its oil facilities.

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This memorandum was prepared by [redacted] Petroleum Resources Branch, Office of Global Issues. The information contained herein is updated as of 19 November 1984. Comments may be directed to [redacted] Chief, Strategic Resources Division [redacted]

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GI M 84-10210

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Mexican Oil: Production Surge Capacity, Export Capacity, and Facility Vulnerability

Production Surge Capacity Within 30 Days

Mexico now claims to have between 300,000 and 400,000 b/d of excess production capacity. Nearly half of this excess capacity claimed by Pemex, however, may be the result of choking back heavy oil production to conserve reservoir pressure at Cantarell field in the Bay of Campeche, Mexico's largest field. The Cantarell reservoir has a drive mechanism that is very sensitive to the production rate. Overproduction could cause more gas to be produced at the expense of oil production, and decrease the amount of oil ultimately recoverable. From a technical point of view, we believe that Pemex engineers are using good judgment in restricting production at Cantarell. As a result, we do not count this choked back oil production of 100,000 to 200,000 b/d as being true excess capacity, because we are not certain that Mexico would produce this oil even for short periods because of concern over the potential damage to reservoirs. 25X1

In addition to production choked back for pressure maintenance, there is probably about 200,000 b/d of heavy oil capacity that has been choked back at Cantarell because of weak oil demand. We believe that this market driven excess capacity is the only real excess capacity Mexico has to draw on, should circumstances warrant. Judging from production trends earlier this year, Pemex could probably bring this oil into production within 30 days, and still not affect the pressure maintenance program at Cantarell field. 25X1

Production Increases After 30 Days

We believe that there would be little, if any, excess capacity left to draw on after the initial increase. Additional production would have to come from an increase in development and exploratory drilling, both of which are time consuming. It takes about one year to drill each well in the Bay of Campeche, and slightly less than a year for wells in the onshore Reforma trend. The time required to bring a well into production after drilling is completed varies, but we estimate that it would take at least another year unless infrastructure were already nearby. Regardless of the time required, we doubt if the Mexican government could afford to fund more drilling than in its current program, given its present weak financial condition. Moreover, sufficient funds would still not eliminate the time lag required for drilling to be done. 25X1

Oil Export Capacity

Embassy sources indicate that current crude oil export capacity is about 2.0 million b/d. 25X1

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[redacted] sustainable export capacity is between 1.6 and 1.7 million b/d. There are indications that some Mexican crude oil loading facilities--loading buoys in particular--are in poor condition and are currently operating at near maximum capacity. [redacted]

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Mexico plans to increase its storage capacity for crude oil and refined products to about 27 million barrels by 1986, from the current 10 million barrels--less than seven days of crude oil exports. Of this increase, 12 million barrels reportedly will be devoted to storage of crude oil earmarked for export. Such an increase in crude oil and refined product storage capacity could help meet any surge in demand during the first 30 days of a world oil supply disruption. The increased storage capacity set aside for the foreign market, however, represents only an additional eight days--for a total cushion of 15 days of exports at Mexico's current export rate. [redacted]

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Facilities Security

Mexico's oil facilities are highly vulnerable to sabotage or unconventional attack. Over 60 percent of Mexico's oil production is concentrated on about 20 offshore platforms in the Gulf of Mexico, and most of the rest comes from fields in nearby Tabasco and Chiapas states. The resurgence in Mexico's oil production since the mid-1970s has encouraged Pemex to use modern technology in developing its new fields. The facilities are highly integrated, and the equipment is designed to take advantage of the economics of large-scale operations. The system, however, has minimum redundancy in many areas and is highly vulnerable to disruption should even one facility be damaged or destroyed. [redacted]

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Mexico's crude oil loading terminal in the Bay of Campeche, Cayo Arcas, is especially vulnerable, being located 150 km from shore. Mindful of the vulnerability of this facility, Pemex also has multiple large-diameter pipelines from the offshore fields to its two Gulf Coast crude oil export terminals, reducing the possibility of export disruptions should Cayo Arcas close down for any reason. [redacted]

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Mexico's ability to defend oil facilities against sabotage or other physical attack is limited. Although military units are stationed in oil producing areas, none are permanently assigned to oil facilities. According to a US military officer with experience in Mexico, security at major installations consists of little more than an armed guard at the gate. Although most facilities are fenced, none have sophisticated electronic monitoring systems. In recent years, Mexico City has considered ways to improve its defense of the most vital oil installations. The Air Force has purchased a few fighter aircraft to bolster air defenses. The Navy has contemplated updating coastal surveillance systems to protect vulnerable offshore oil facilities in the Bay of Campeche. The government

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has also considered establishing a special 5,000-man force dedicated to oilfield security. Because of Mexico's pressing economic difficulties, however, we believe it will be some time before substantial investments are made in oil facilities security.

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